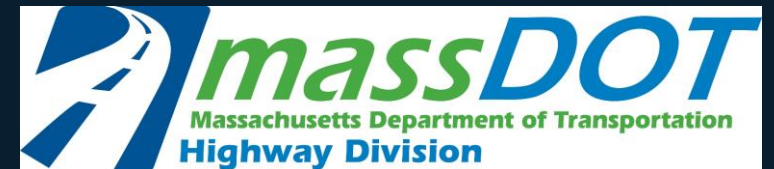


Public Information Meeting

Bridge Replacement & Interchange Improvements at Rt 27 (North Main St) over Rt 9 (Worcester St)

NATICK, MA | PROJECT FILE NO. 605313

JUNE 12, 2019



MEETING OBJECTIVES:

1. Describe Conceptual Plans
2. Obtain Feedback
 - Open House Format
 - Feedback Forms
 - Project Email



PROJECT BACKGROUND:



Rt 9 ADT = 56,000
Rt 27 ADT = 29,400

Note Adjacent Proj. 605034

PROJECT BACKGROUND:



PROJECT BACKGROUND:

Project Needs & Goals

1. Increase Safety
2. Improve Mobility for All Users
3. Bridge Replacement
4. Improve Operations





PROJECT BACKGROUND:



PREVIOUS 25% DESIGN:



PREVIOUS 25% DESIGN:

Public Feedback at 25% Design Public Hearing:

1. Safety
 - Pedestrian Facilities
 - Bicycle Facilities
2. Traffic Congestion
 - U-Turns
 - Diverted Trips
3. Traffic Signals Could Worsen Traffic



PREVIOUS 25% DESIGN:

Since the 25% Design Public Hearing

- Process Feedback
- Think Outside the Box
- Report Back and Solicit Feedback
- Advance Toward 25% Design

Guiding Principles

- Improve **SAFETY** for all Users
- Provide **MULTI-MODAL** Accommodations
- Enhance **MOBILITY** for all Users
- Replace Bridge Structure
- Improve Operations
- Support Natick's Quality of Life
 - Context Sensitive

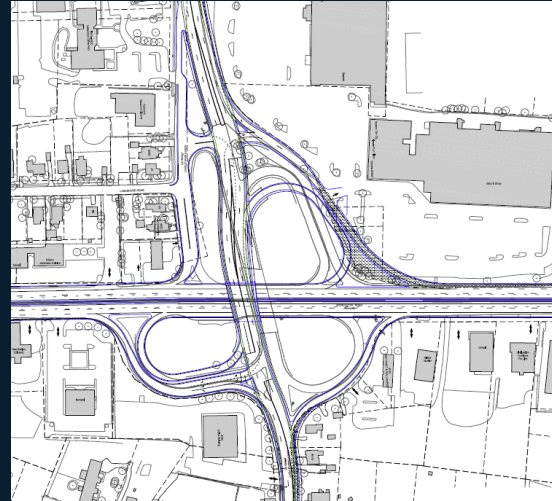


OPTIONS CONSIDERED:

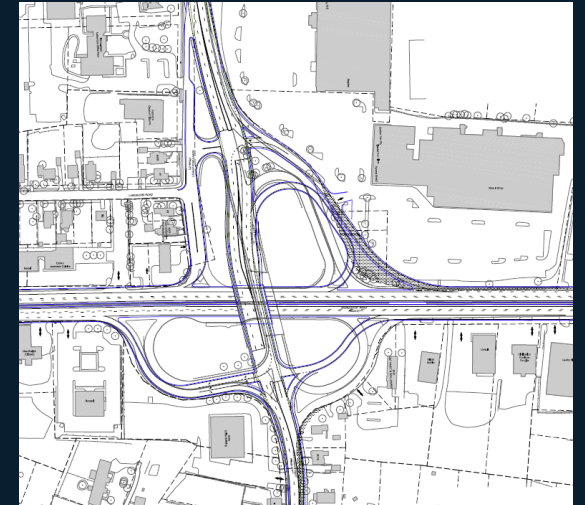
Dismissed

- Excessive ROW impacts and/or unacceptable operations
- Did not meet project needs and goals

Partial Cloverleaf Interchange Ver 1



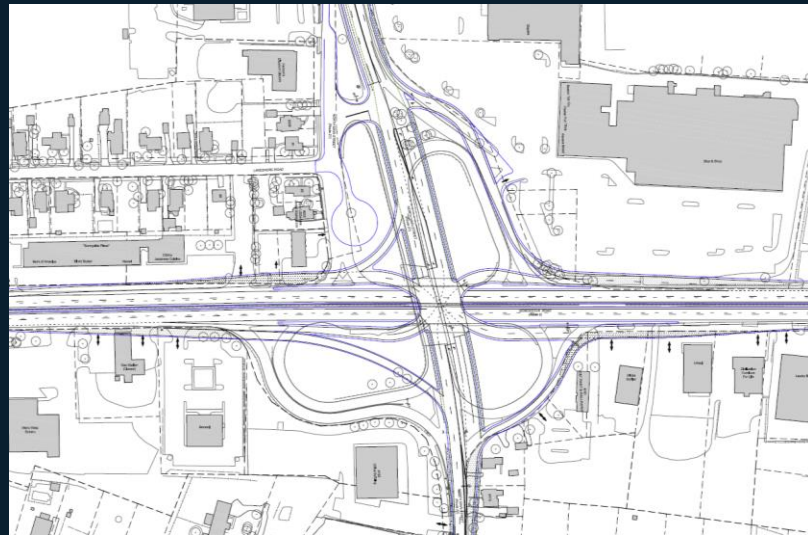
Partial Cloverleaf Interchange Ver 2



'Teardrop' Interchange

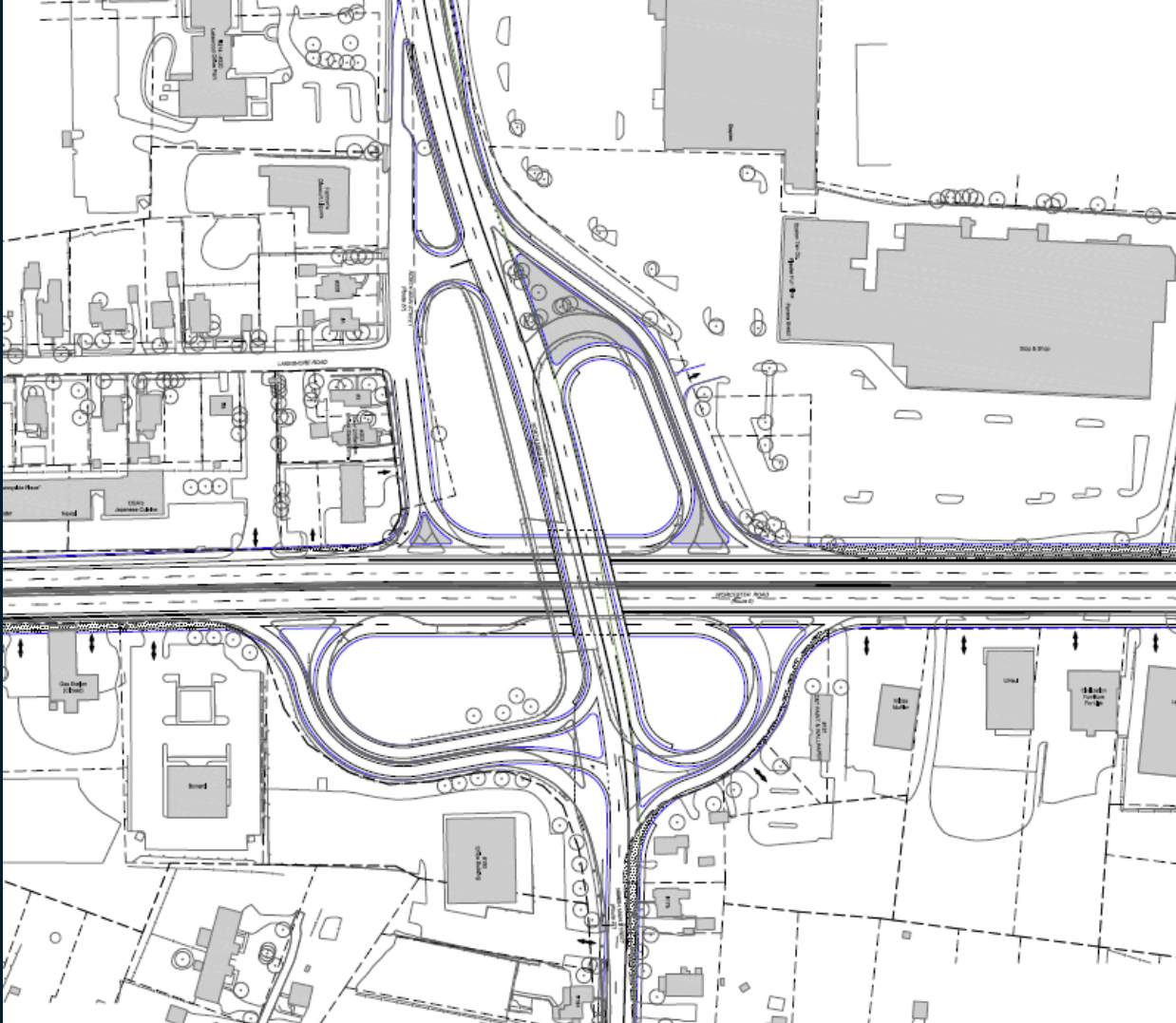


Signalized 'Circle'



OPTIONS CONSIDERED:

Cloverleaf w/ Frontage Road

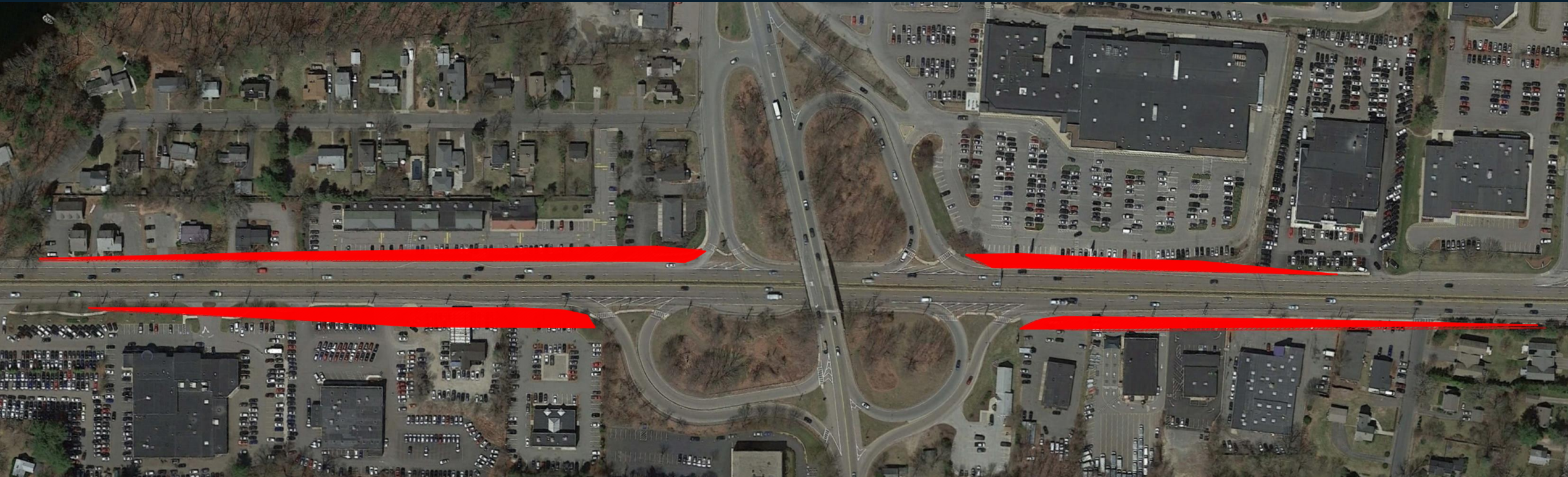


Dismissed

- Excessive ROW Impacts
- Does not address safety along Rt 27 or bike/ped issues
- Excessive Bridge Span

OPTIONS CONSIDERED:

Cloverleaf w/ Frontage Road



ROW Impacts = 



CONCEPT 1:



- Traffic Calming
- Less Severe Crashes
- FHWA Proven Safety Countermeasure



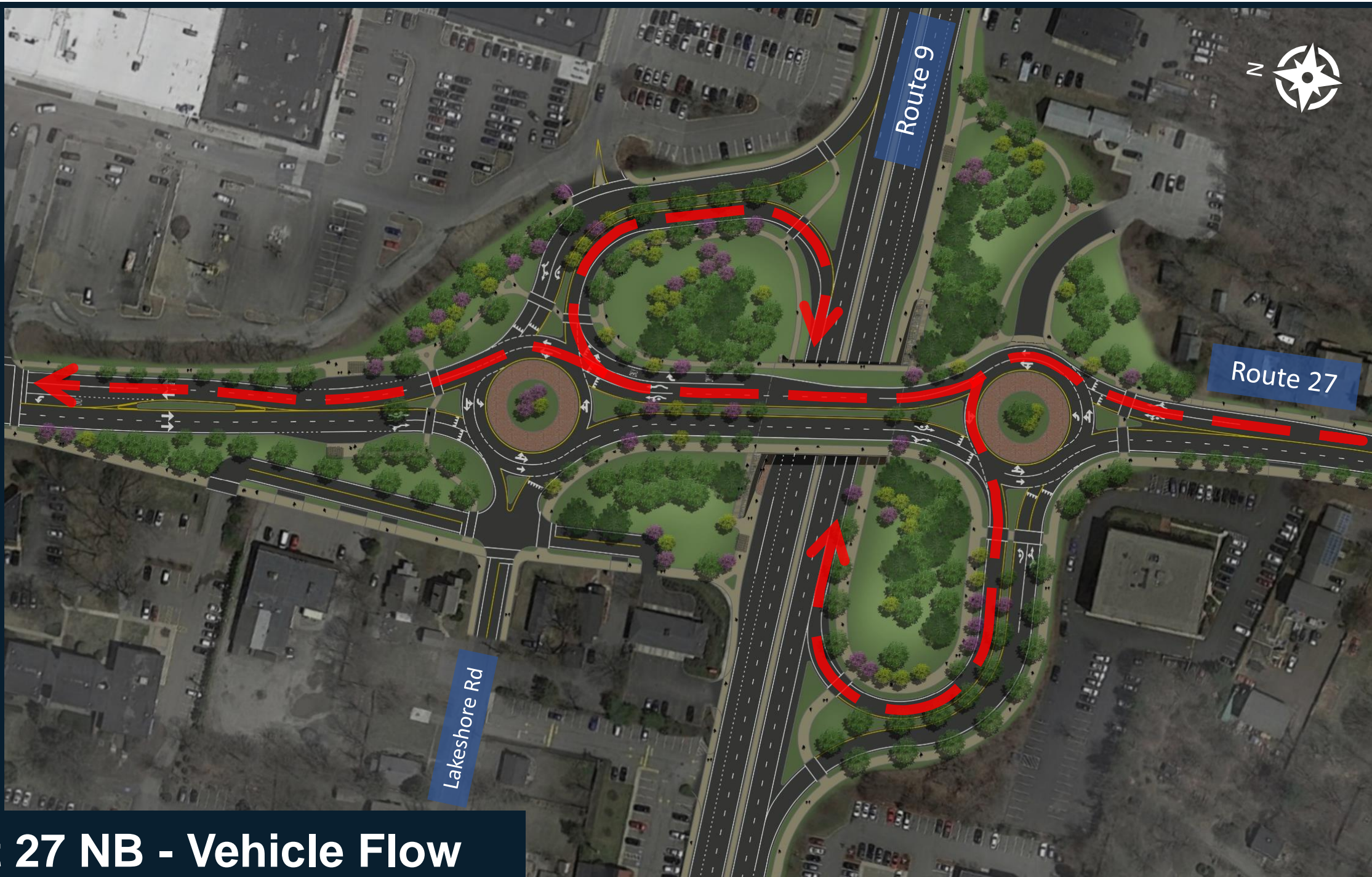
Route 9

Route 27

Lakeshore Rd

- Shared Use Path =
- Sidewalk =
- Bus Stop =

Bicycle/Pedestrian Network

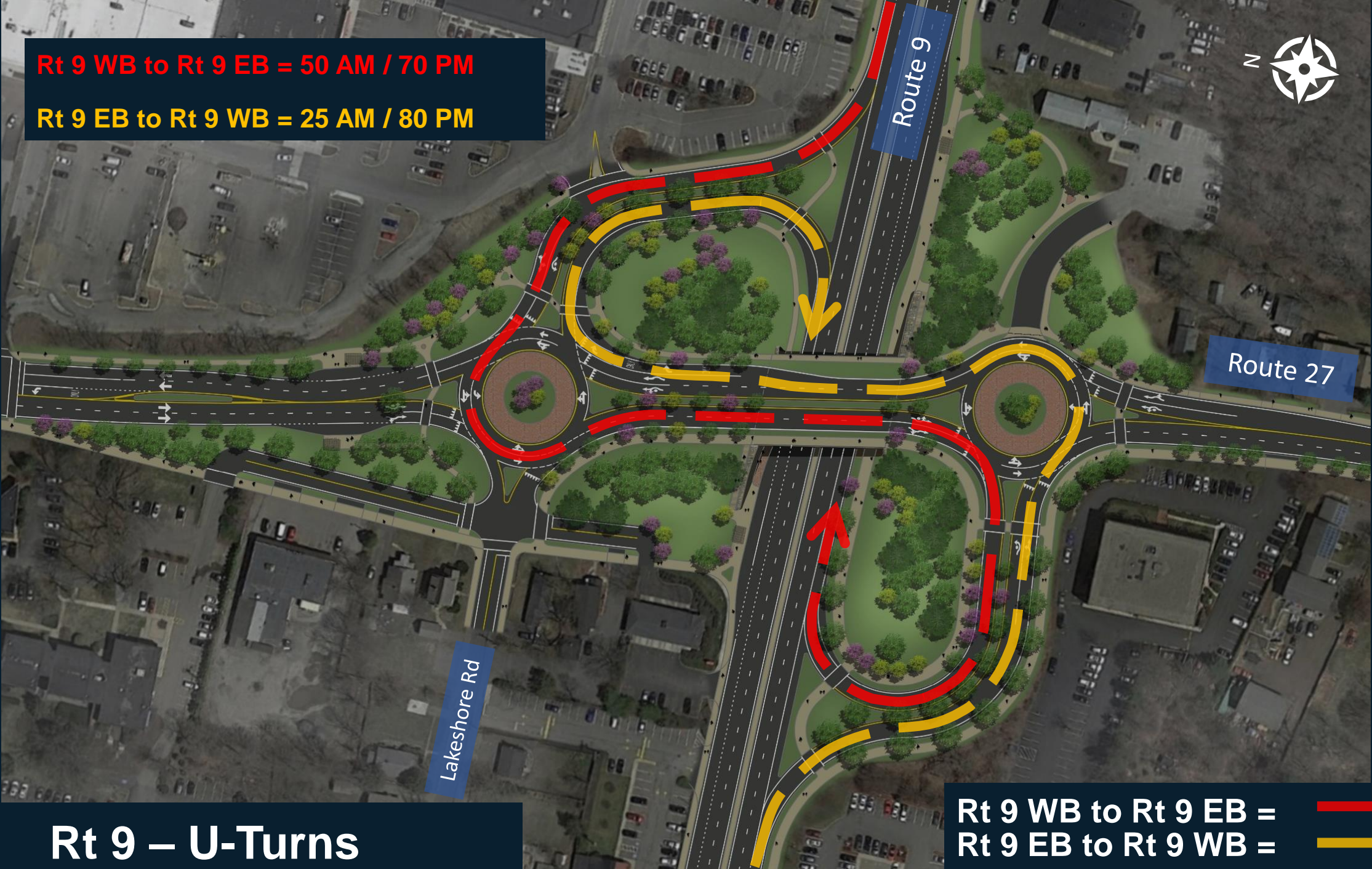


Rt 27 NB - Vehicle Flow



Rt 27 SB - Vehicle Flow

Rt 9 WB to Rt 9 EB = 50 AM / 70 PM
Rt 9 EB to Rt 9 WB = 25 AM / 80 PM



Rt 9 – U-Turns

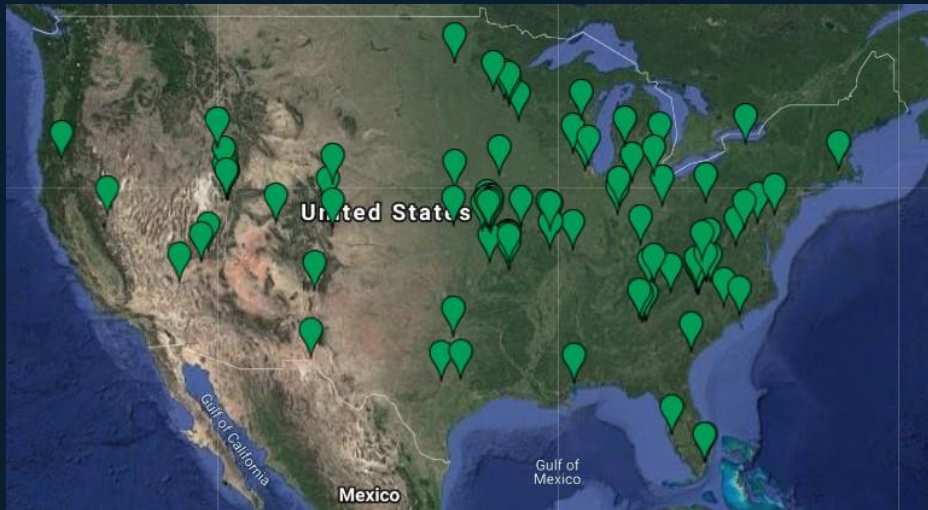
Rt 9 WB to Rt 9 EB =  
Rt 9 EB to Rt 9 WB =  



CONCEPT 2:

Concept 2...Modified Diverging Diamond

- “An innovative, Proven Solution for Improving Safety and Mobility at Interchanges”
(<https://safety.fhwa.dot.gov/intersection/innovative/crossover/brochures/ddi/>)
- Eliminates left turn crashes
- Significant reduction in conflict points from traditional diamond interchange
- Integrates all users safely



In Northeast:

- Brighton, NY, 2012
- Being Considered
 - Colchester, VT
 - Lebanon, NH

In U.S.A.:

- First built in 2009
- 105 operational
- 23 in construction







CONCEPT 2:



- Simplified Signal Operations
- Signalized Bike/Ped Crossings
- Shorter Crossings
- Fewer Conflict Points



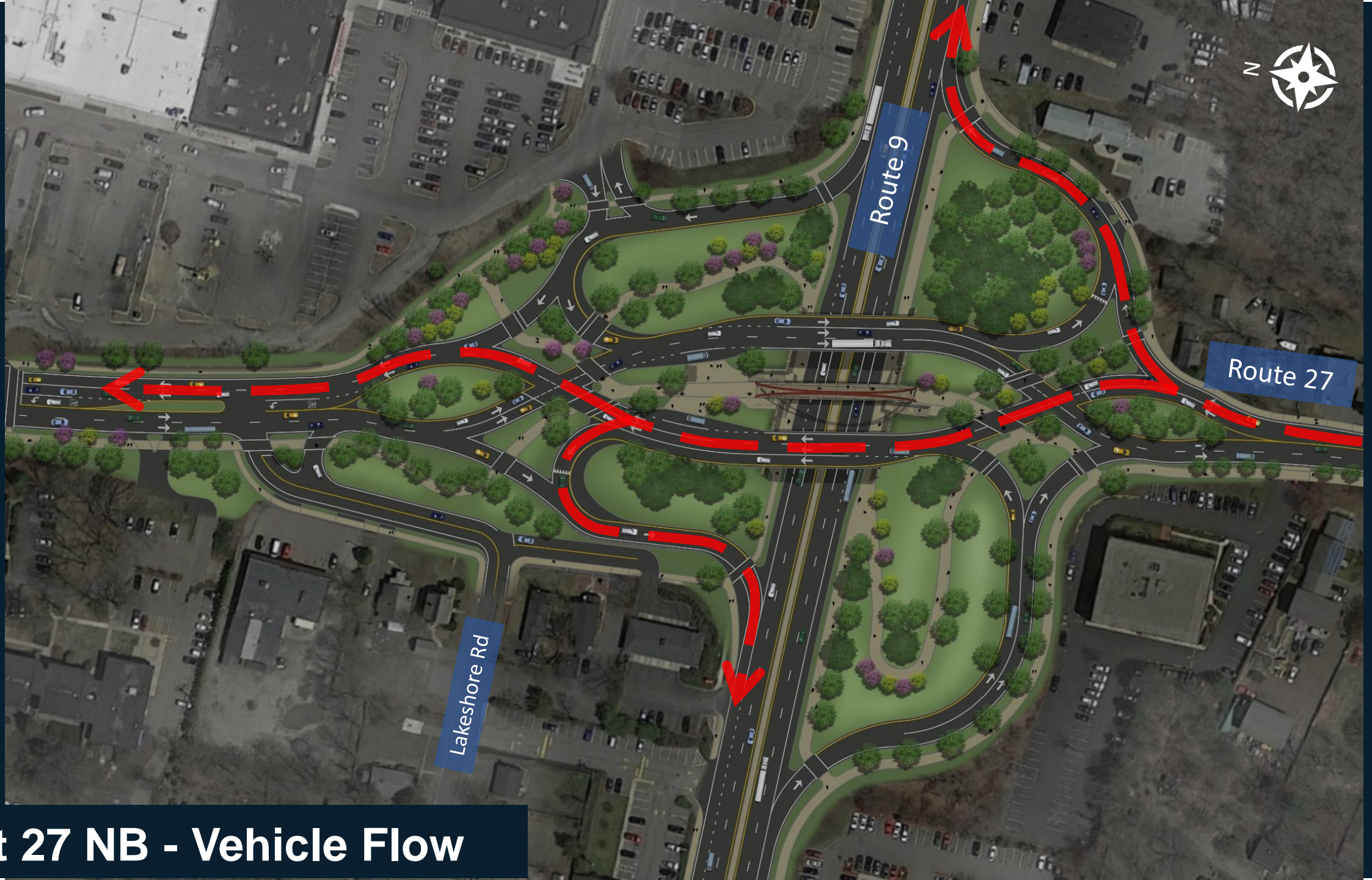
Route 9

Route 27

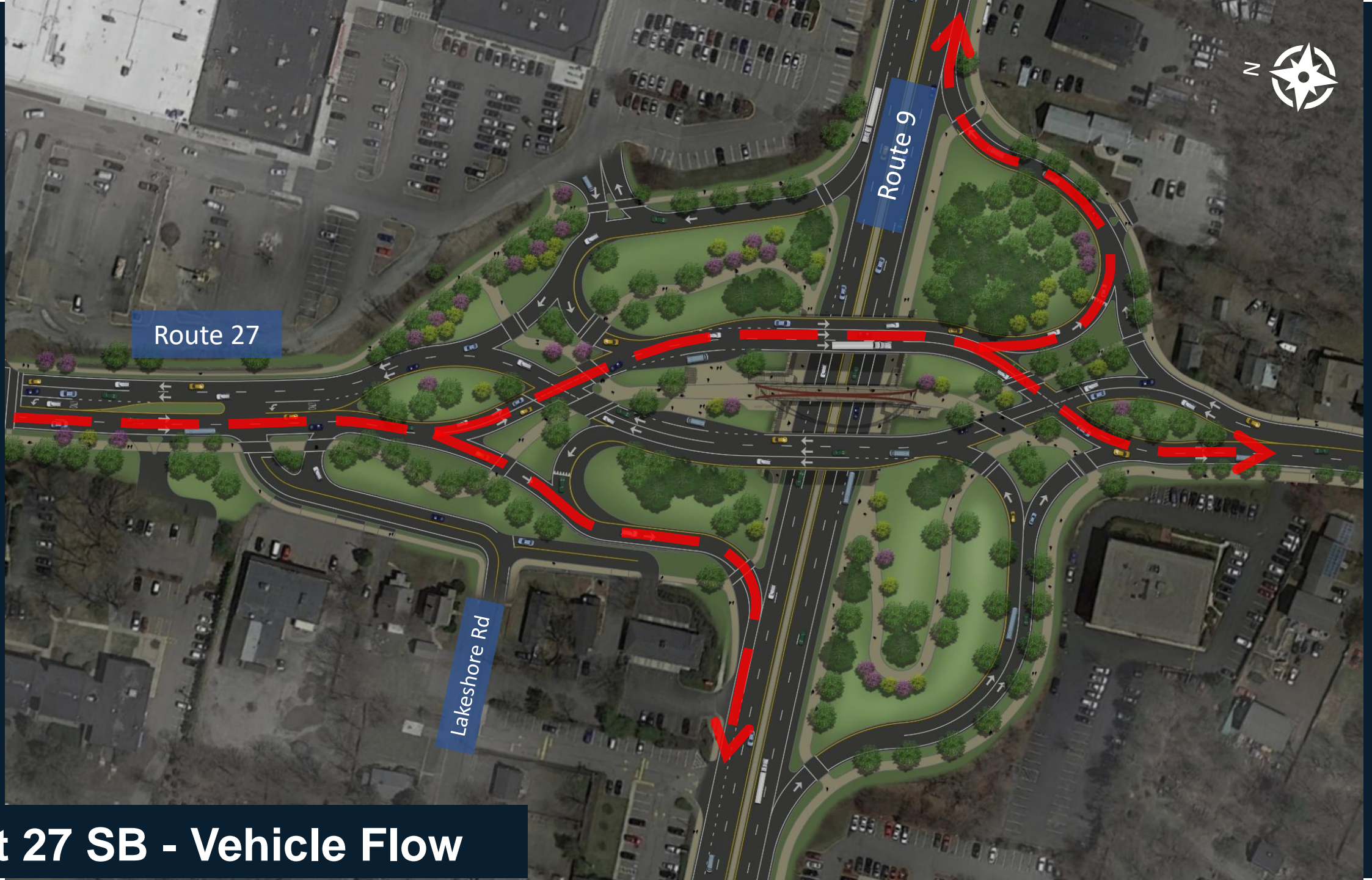
Lakeshore Rd

Shared Use Path = 
Sidewalk = 
Bus Stop = 

Bicycle/Pedestrian Network



Rt 27 NB - Vehicle Flow



Rt 27 SB - Vehicle Flow




Rt 9 WB to Rt 9 EB = 50 AM / 70 PM
Rt 9 EB to Rt 9 WB = 25 AM / 80 PM



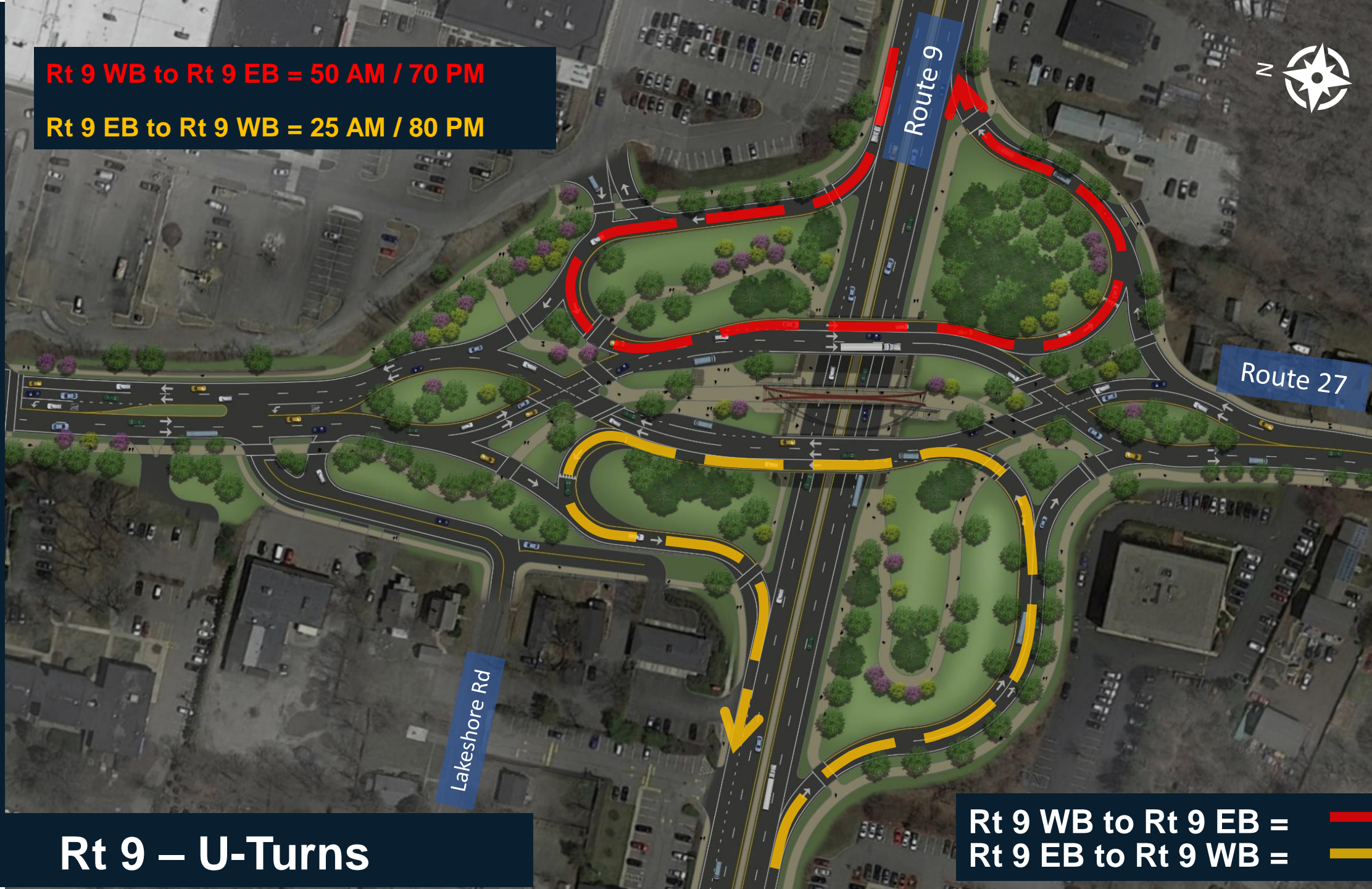
Route 9

Route 27

Lakeshore Rd

Rt 9 WB to Rt 9 EB =  
Rt 9 EB to Rt 9 WB =  

Rt 9 – U-Turns





CONCEPTS 1 & 2:

Both Options will Accomplish the Following:

- Increase Safety
 - Eliminate STOP controlled Rt 9 on-ramps
 - Lengthen acceleration lanes along Rt 9 / eliminate substandard weaving
- Improve Mobility for All Users
 - Provide a Shared Use Path and connections to Cochituate Rail Trail / Bacon St / Rutledge Rd
 - Provide improved MWRTA transit stops
- Replace the Bridge
- Improve Operations
 - For the on/off ramps
 - At the 9/27 Exchange shopping center traffic signal
- Provide Landscaping
- Have comparable ROW impacts

CONCEPTS 1 & 2:

Concept Strengths

Concept 1 - Roundabouts

- Traffic Calming
- Off-Peak Efficiency
- More Familiar Intersection Design
- More Direct Lakeshore Rd Access to Interchange

Concept 2 - Modified Diverging Diamond

- Signalized Bike/Pedestrian Crossings
- Shared Use Path Bridge Over Rt 9
- Simplified Signal Design
- Fewer Conflict Points
- Transit Interconnectivity / No Rt 9 Acceleration Lane Conflict
- Constructability Benefits
- More Direct Ability for Rt 9 Traffic U-Turn

OPEN HOUSE:

Bridge Replacement & Interchange Improvements at
Rt 27 (North Main St) over Rt 9 (Worcester St)

NATICK, MA | PROJECT FILE NO. 605313

1. Review and Discuss Conceptual Designs

2. We Want To Hear From You...

- Comment Sheets
- Project Email Address

Rt27Rt9Natick@dot.state.ma.us

THANK YOU!

